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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,193	01/30/2004	Masaru Oda	392.1865	5035

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EXAMINER

BUKOWCZYK, JEREMY

ART UNIT	PAPER NUMBER
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3609

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/767,193

Applicant(s)

ODA ET AL.

Examiner

Jeremy Bukowczyk

Art Unit

3609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1/2/04, 11/16/04, 10/11/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Kelley et al. (4,402,053).

Kelley discloses an object taking-out apparatus for taking out an object, using a robot (20) having a robot arm (22) and controlled by a robot controller (col. 4, lines 19-22), comprising: a hand (26) attached to a distal end of the robot arm and having holding means for holding an object (col. 4, lines 66-68 and col.5, lines 1-4); and orientation changing means (col. 4, lines 10-13) provided at said hand (col. 14, lines 25-27), for changing orientation of said holding means to selectively take one of a plurality of orientations including a first orientation (col. 14, lines 27-29) and a second orientation (col. 14, lines 31-32) different from each other in accordance with a command from the robot controller (col. 4, lines 30-31). Kelley also discloses a center of holding by said holding means that is offset from an axis of a proximal portion thereof (col. 5, lines 36-38).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 3, 4, 5, 11, 12, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelley et al. (4,402,053).

As per claims 2, 3, 4, 5, 11, 12, 17, Kelley discloses all the claimed elements as mentioned in claims 1 and 10, and further discloses a center of holding offset from an axis of a proximal portion (col. 4, lines 36-38), Kelley fails to disclose specific ranges, for example, an angle equal to or less than 45 degrees or an angle substantially equal to 90 degrees.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify an object taking-out apparatus for taking out an object of Kelley to include a plurality of orientations at a plurality of angles, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

As per claim 20, Kelley further discloses a visual sensor attached to the distal end of end of a robot arm (42), but Kelley fails to disclose a slider mechanism for the visual sensor to move on.

Art Unit: 3609

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify an object taking-out apparatus for taking out an object of Kelley to include a slider mechanism for the visual sensor to move on, since it has been held that the provision of adjustability, where needed, involves only routine skill in the art. *In re Stevens*, 101 USPQ 284 (CCPA 1954).

5. Claims 6, 7, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelley et al. (4,402,053), in view of Kanno (US 6,597,971 B2).

Kelley discloses all the claimed elements as mentioned in claims 1 and 10, and further discloses a visual sensor (44) for detecting a condition of placement of an object (col. 7, lines 18-19), an orientation changing means (col. 4, lines 66-68), a visual sensor having means for storing taught image models of an object as seen from different directions (col. 10, lines 46-52), a means for comparing a captured image of the object with the taught image models (col. 8, lines 36-38), and for selecting one of the taught image models according to a degree of conformity (col. 8, lines 38-39), Kelley fails to disclose that said orientation changing means changes the orientation of a holding means according to a detected condition or taught image model before holding the object.

Kanno in the same field of invention discloses an object taking out apparatus with an orientation changing means that changes the orientation of said holding means according to detected conditions (col. 4, lines 8-11) and taught image models (col. 7, lines 59-62) before holding the object.

Art Unit: 3609

From this teaching of Kanno, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the object taking-out apparatus of Kelly to include an orientation changing means that changes the orientation of a holding means according to detected conditions and taught image models as taught by Kanno in order for a robot to pick up randomly stored work pieces to reduce a burden on an operator (col.1, lines 50-53).

6. Claims 8, 9, 15, 16, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelley et al. (4,402,053), in view of Wilder et al. (4,613,269).

As per claims 8, 15, and 18, although Kelley discloses all the claimed elements as mentioned in claims 1 and 10, Kelley fails to disclose a visual sensor for detecting condition of overlapping of objects, wherein a holding position of the object by said holding means is changed according to the detected condition.

Wilder in the same field of invention discloses an object taking out apparatus with a visual sensor (1) for detecting condition of overlapping of objects (via 105; Fig. 6), wherein a holding position of the object by said holding means is changed according to the detected condition (via 125; col. 9, lines 26-28).

From this teaching of Wilder, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the object taking-out apparatus of Kelly to include a visual sensor for detecting condition of overlapping of objects, wherein a holding position of the object by said holding means is changed according to the detected condition as taught by Wilder in order to acquire jumbled

Art Unit: 3609

objects or work pieces from a bin and transferring them to an intermediate or final site (Wilder, col. 1, lines 37-39).

As per claims 9, 16, and 19, the combination of Kelley and Wilder fails to disclose the use of a slider mechanism for the visual sensor to move on.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to modify an object taking-out apparatus for taking out an object of Kelley to include a slider mechanism for the visual sensor to move on, since it has been held that the provision of adjustability, where needed, involves only routine skill in the art. *In re Stevens*, 101 USPQ 284 (CCPA 1954).

7. Although Applicant uses "means for" in the claims 1, 7, 10, and 14 it is the Examiner's position that the "means for" phrases do not invoke 35 U.S.C. §112 6th paragraph. If Applicant concurs, the Examiner respectfully requests Applicant to either amend the claims to remove all instances of "means for" from the claims, or to explicitly state on the record why 35 U.S.C. §112 6th paragraph should not be invoked.

Alternatively, if Applicant desires to invoke 35 U.S.C. §112 6th paragraph, the Examiner respectfully requests Applicant to expressly state their desire on the record. Upon receiving such express invocation of 35 U.S.C. §112 6th paragraph, the "means for" phrases will be interpreted as set forth in the *Supplemental Examination Guidelines for Determining the Applicability of 35 USC 112 6¶*. (Federal Register Vol. 65, No. 120, June 21, 2000.)

Failure by Applicant in their next response to address the 35 U.S.C. 112 6th paragraph issues in accordance with 37 C.F.R. §1.111(b) or to be non-responsive to

Art Unit: 3609

this issue entirely will be considered a desire by Applicant *NOT* to invoke 35 U.S.C.

§112 6th paragraph. Unless expressly noted otherwise by the Examiner, the preceding discussion on 35 U.S.C. §112 6th paragraph applies to all examined claims currently pending.

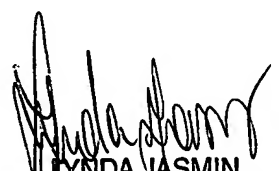
Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy Bukowczyk whose telephone number is 571-270-3022. The examiner can normally be reached on Mon-Thu 6:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynda Jasmin can be reached on 571-270-3033. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jb

 2/15/07
LYNDA JASMIN
SUPERVISORY PATENT EXAMINER